CLAIMS

We claim:

1. A method of controlling elevator car travel, comprising:

grouping floors (2-17) into preliminary, contiguous sectors; and

rearranging the preliminary sectors into a plurality of sectors (S_1-S_4) where at least one of the sectors includes at least one floor that is not contiguous with at least one other floor in the one sector.

2. The method of claim 1, including assigning at least one elevator car (22-30) to each sector.

3. The method of claim 1, including grouping some of the floors into at least two sectors contiguous with each other, the two sectors having every floor contiguous with another floor in the sector, respectively.

4. The method of claim 1, including changing at least one floor from at least one preliminary sector with at least one floor from another preliminary sector.

5. The method of claim 4, wherein there are N changes, where N is greater than or equal to (1/2) (the average number of floors per sector).

6. The method of claim 1, including grouping floors so that each sector has at least one floor contiguous with a floor from another sector and a remaining number of floors contiguous with each other.

7. The method of claim 1, wherein there are S sectors and F floors per sector and grouping the floors sequentially into sectors such that each sector has a highest unassigned (F-1) floors and the $(S-m)^{th}$ floor, where m is the number of established sectors.

8. The method of claim 1, including grouping the floors into k preliminary, contiguous sectors and then rearranging each preliminary sector into m non-contiguous sectors, where k is greater than or equal to 2 and m is greater than or equal to 2.

9. The method of claim 1, wherein there are C cars and including grouping the floors into S preliminary sectors where S=C/k and then rearranging each preliminary sector into k sectors having every k^{th} floor in each sector, where k is an integer greater than or equal to 2.

10. The method of claim 11, wherein k=2 and a first sector has alternating floors with another sector.

11. The method of claim 1, wherein each of the sectors has at least one floor that is not contiguous with at least one other floor in the sector.

12. The method of claim 1, including using at least two of:

changing at least one floor from at least one preliminary sector with at least one floor from another preliminary sector;

grouping floors so that each sector has at least one floor contiguous with a floor from another sector and a remaining number of floors contiguous with each other;

grouping the floors sequentially into sectors such that each sector has a highest unassigned (F-1) floors and the $(S-m)^{th}$ floor, where there are S sectors, F floors per sector and m is the number of established sectors;

grouping the floors into k preliminary, contiguous sectors and then rearranging each preliminary sector into m non-contiguous sectors, where k is greater than or equal to 2 and m is greater than or equal to 2; and

grouping the floors into S preliminary sectors where S=C/k and then rearranging each preliminary sector into k sectors having every k^{th} floor in each sector, where there are C cars and k is an integer greater than or equal to 2.

13. An elevator system, comprising:

a plurality of elevator cars (22-30), each capable of serving a plurality of floors; and

a controller (42) that groups the floors into preliminary, contiguous sectors and then rearranges the preliminary sectors into sectors (S_1-S_4) with at least one sector having at least one floor that is not contiguous with at least one other floor in the one sector.

14. The system of claim 13, wherein the controller (42) changes at least one floor from one preliminary sector with at least one floor form another preliminary sector.

15. The system of claim 14, wherein there are N changes, where N is greater than or equal to (1/2) (the average number of floors per sector).

16. The system of claim 13, wherein there are S sectors, F floors per sector and the controller (42) sequentially groups the floors into sectors in an order where a current grouping of floors includes the highest unassigned (F-1) floors and the $(S-m)^{th}$ floor, where m is the number of established sectors.

17. The system of claim 13, wherein the controller (42) groups the floors into K preliminary, contiguous sectors and then rearranges each preliminary sector into M non-contiguous sectors, where K is greater than or equal to 2 and M is greater than or equal to 2.

18. The system of claim 13, wherein there are C cars (22-30) and the controller (42) groups the floors into F preliminary sectors where S = C/K, the controller then rearranges each preliminary sector into K sectors having every K^{th} floor in each sector, where K is greater than or equal to 2.

19. The system of claim 13, wherein the controller (42) groups the floors so that at least two of the sectors are contiguous with each other and the two contiguous sectors have every floor contiguous with another floor in each of the two sectors, respectively.

20. A method of controlling elevator car travel, comprising:

grouping floors sequentially into sectors such that each sector has a highest unassigned (F-1) floors and the $(S-m)^{th}$ floor, where there are S sectors, F floors per sector and m is the number of established sectors.

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